available in the art may, e.g., be used as the basis from which to clone and thus supply a complementary light chain if a S2C6 heavy chain is to be recombinantly expressed (the two chains may be recombinantly expressed in the same cell or combined in vitro after separate expression and purification); alternatively, a light chain from an antibody of any specificity may be used. Nucleic acids (e.g., a plasmid) encoding a S2C6 heavy chain or encoding a molecule comprising a S2C6 heavy chain variable domain can be transfected into a cell expressing an antibody light chain or molecule comprising an antibody light chain, for expression of a multimeric protein; the antibody light chain can be recombinant or non-recombinant, and may or may not have anti-CD40 specificity. Alternatively, S2C6 heavy chains or molecules comprising the variable region thereof or a CDR thereof can optionally be expressed and used without the presence of a complementary light chain or light chain variable region. In various embodiments, the invention provides a S2C6 heavy chain with CD40 binding affinity, or a molecule consisting of or (alternatively) comprising one or more copies of heavy chain CDR 1, 2, and/or 3 (corresponding to SEQ ID NO:8, 9, and/or 10, respectively), or a protein (peptide or polypeptide) the sequence of which consists of, or comprises, one or more copies of CDR 1, 2 or 3 (corresponding to SEQ ID NO:8, 9 or 10, respectively). In a specific embodiment, such a protein can be N or C-terminal modified, e.g., by C-terminal amidation or N-terminal acetylation.

Please replace the paragraph header on page 58 entitled "10. DEPOSIT OF MICROORGANISM" with the following paragraph header:

10. DEPOSIT OF HYBRIDOMA

IN THE CLAIMS:

Please amend the claims as follows:

Cancel claims 10-20, 26-33 and 37 without prejudice.

Replace claims 1, 2, 8, 9, 21-24 and 36 with the following claims:

1. (Amended) A molecule comprising SEQ ID NO:8, SEQ ID NO:9, or SEQ ID NO:10, which molecule (a) binds CD40, and (b) comprises one or more substitutions or insertions in primary amino acid sequence relative to native monoclonal antibody S2C6 as secreted by the hybridoma deposited with the ATCC and assigned accession number PTA-110.

2. (Amended) The molecule of claim 1 comprising the amino acid sequence of SEQ ID NO:7.

8. (Amended) A protein comprising an amino acid sequence that has at least 95% identity to SEQ ID NO:7 as determined by use of the BLASTp computer program, which protein (a) binds CD40; and (b) comprises one or more substitutions or insertions in primary amino acid sequence relative to native monoclonal antibody S2C6 as secreted by the hybridoma deposited with the ATCC and assigned accession number PTA-110.

9. (Amended) A protein, which protein (a) competes for binding to CD40 with monoclonal antibody S2C6 as secreted by the hybridoma deposited with the ATCC and assigned accession number PTA-110, (b) increases the binding of CD40 ligand to cell surface CD40 by at least 45%, and (c) comprises one or more substitutions or insertions in primary amino acid sequence relative to native monoclonal antibody S2C6 as secreted by the hybridoma deposited with the ATCC and assigned accession number PTA-110.

21. (Amended) A pharmaceutical composition comprising:

(a) a molecule comprising SEQ ID NO:2, SEQ ID NO:3, SEQ ID NO:4, SEQ ID NO:7, SEQ ID NO:8, SEQ ID NO:9, or SEQ ID NO:10, which molecule (i) binds CD40, (ii) increases the binding of CD40 ligand to cell surface CD40 by at least 45%, and (iii) comprises one or more substitutions or insertions in primary amino acid sequence relative to native monoclonal antibody S2C6 as secreted by the hybridoma deposited with the ATCC and assigned accession number PTA-110, in an amount effective for the treatment or prevention of cancer; and

(b) a pharmaceutically acceptable carrier.

22. (Amended) A pharmaceutical composition comprising:

(a) a protein, which protein (i) competes for binding to CD40 with monoclonal antibody S2C6 as secreted by the hybridoma deposited with the ATCC and assigned accession number PTA-110, (ii) increases the binding of CD40 ligand to cell surface CD40 by at least 45%, and (iii) comprises one or more substitutions or insertions in

primary amino acid sequence relative to native monoclonal antibody S2C6 as secreted by the hybridoma deposited with the ATCC and assigned accession number PTA-110, in an amount effective for the treatment or prevention of cancer; and

(b) a pharmaceutically acceptable carrier.

23. (Amended) A pharmaceutical composition comprising:

(a) a molecule comprising SEQ ID NO:2, SEQ ID NO:3, SEQ ID NO:4, SEQ ID NO:7, SEQ ID NO:8, SEQ ID NO:9, or SEQ ID NO:10, which molecule (i) binds CD40,(ii) increases the binding of CD40 ligand to cell surface CD40 by at least 45%, and (iii) comprises one or more substitutions or insertions in primary amino acid sequence relative to native monoclonal antibody S2C6 as secreted by the hybridoma deposited with the ATCC and assigned accession number PTA-110, in an amount effective for activating or augmenting an immune response; and

(b) a pharmaceutically acceptable carrier.

24. (Amended) A pharmaceutical composition comprising:

(a) a protein, which protein (i) competes for binding to CD40 with monoclonal antibody S2C6 as secreted by the hybridoma deposited with the ATCC and assigned accession number PTA-110,(ii) increases the binding of CD40 ligand to cell surface CD40 by at least 45%, and (iii) comprises one or more substitutions or insertions in primary amino acid sequence relative to native monoclonal antibody S2C6 as secreted by the hybridoma deposited with the ATCC and assigned accession number PTA-110, in an amount effective for activating or augmenting an immune response; and

(b) a pharmaceutically acceptable carrier.

36. (Amended) A pharmaceutical composition comprising in an amount effective for the treatment or prevention of cancer or an immune disorder, or for activating or augmenting an immune response: (a) a molecule that binds CD40, which molecule

increases the binding of CD40 ligand to cell surface CD40; (b) CD40 ligand; and (c) a pharmaceutically acceptable carrier.

Please add the following new claims:

38. (New) A pharmaceutical composition comprising the molecule of claim 1, 2, 3, 4, 5, or 6; and a pharmaceutically acceptable carrier.

39. (New) A pharmaceutical composition comprising the molecule of claim 7; and a pharmaceutically acceptable carrier.

40. (New) The antibody of claim 3 which is an immunoglobulin.

41. (New) The antibody of claim 3 which comprises a human constant region.

42. (New) The antibody of claim 3 which is humanized.

43. (New) The molecule of claim 2, further comprising SEQ ID NO:2.

44. (New) A protein comprising an amino acid sequence that has at least 80% identity to SEQ ID NO:9 as determined by use of the BLASTp computer program, which protein (a) binds CD40; and (b) comprises one or more substitutions or insertions in primary amino acid sequence relative to native monoclonal antibody S2C6 as secreted by the hybridoma deposited with the ATCC and assigned accession number PTA-110.

45. (New) A protein encoded by a first nucleic acid that hybridizes under high stringency conditions to a second nucleic acid consisting of a sequence encoding SEQ ID NO:7 or SEQ ID NO:9, which protein (a) binds CD40; and (b) comprises one or more substitutions or insertions in primary amino acid sequence relative to native monoclonal antibody S2C6 as secreted by the hybridoma deposited with the ATCC and assigned accession number PTA-110.

46. (New) A protein encoded by a first nucleic acid that hybridizes under conditions of high stringency to a second nucleic acid consisting of a sequence encoding a humanized immunoglobulin heavy chain comprising S2C6 heavy chain CDR1, CDR2, and

CDR3 (SEQ ID NOS.:8, 9, and 10, respectively) in human framework regions; which heavy chain when combined with a complementary immunoglobulin light chain binds CD40.

47. (New) The molecule of claim 1, 2, 3, 4, 5, or 6, which increases the binding of CD40 ligand to cell surface CD40 by at least 45%.

48. (New) The molecule of claim 1, 2, 3, 4, 5, or 6, which increases the binding of CD40 ligand to cell surface CD40 by at least 50%.

49. (New) The molecule of claim 1, 2, 3, 4, 5, or 6, which increases the binding of CD40 ligand to cell surface CD40 by at least 60%.

50. (New) The molecule of claim 1, 2, 3, 4, 5, or 6, which increases the binding of CD40 ligand to cell surface CD40 by at least 65%.

51. (New) The protein of claim 8, which increases the binding of CD40 ligand to cell surface CD40 by at least 45%.

52. (New) The protein of claim 8 or 9, which increases the binding of CD40 ligand to cell surface CD40 by at least 50%.

53. (New) The protein of claim 8 or 9, which increases the binding of CD40 ligand to cell surface CD40 by at least 60%.

54. (New) The protein of claim 8 or 9, which increases the binding of CD40 ligand to cell surface CD40 by at least 65%.

55. (New) The molecule of claim 1, which is a fragment of an antibody containing the binding domain of the antibody.

56. (New) The protein of claim 8 or 9, which is a fragment of an antibody containing the binding domain of the antibody.

57. (New) The protein of claim 8, 9, 44, 45, or 46, which is purified.

58. (New) The molecule of any one of claims 4-6 and 55 which is purified.

59. (New) The molecule of claim 47 which is purified.

60. (New) The protein of claim 56 which is purified.

61. (New) The pharmaceutical composition of claim 21, 23 or 36, in which the molecule is purified.

62. (New) The pharmaceutical composition of claim 38, in which the molecule is purified.

63. (New) The pharmaceutical composition of claim 39, in which the molecule is purified.

64. (New) A pharmaceutical composition comprising the molecule of claim 47; and a pharmaceutically acceptable carrier.

65. (New) The pharmaceutical composition of claim 64, in which the molecule is purified.

66. (New) The pharmaceutical composition of claim 22 or 24, in which the protein is purified.

67. (New) The pharmaceutical composition of claim 25, in which the CD40 ligand is purified.

68. (New) The antibody of claim 40, 41 or 42, which is purified.

REMARKS

Prior to the amendments made herein, claims 1-37 were pending in the instant application.